JOURNAL OF THE

AMERICAN SOCIETY FOR INFORMATION SCIENCE

Index to Volume 24, 1973

Prepared by

ENGINEERING INDEX, INC.
345 East 47th Street
New York, N. Y. 10017

Briefly stated, Engineering Index, Inc. is a private, not-for-profit abstracting and indexing service that maintains a transdisciplinary data base for all fields of engineering and certain related fields of science and management. From the beginning (1884), Ei has assisted the engineering profession by providing various guides to the world's technical literature, yearly at first, then weekly, and monthly, covering the full breadth of all engineering disciplines. These services (available in printed, computer-readable, and microforms) are indexed and cross-indexed to lead the engineer quickly to the abstract, citation, or specific technical subject that he seeks. By scanning these terse, one-paragraph summaries of articles in publications, he can quickly determine whether he wishes to obtain and study complete articles or conference proceedings.

Index Coverage and Organization

This author and subject index covers all papers, brief communications, and letters to the editor that appeared in the journal during 1973. The main entry for each item is listed under the name of the first author in the author index. It includes names of all co-authors, complete title, type of item (if not a paper), issue and page numbers, number of references, and reference to any comments on the item. Entries for an item listed under the names of any co-authors, and under appropriate headings in the subject index, refer the reader to the location of the main entry for that item. The page numbers for the item are also given in each of these cross references. Since the range of pagination for each journal issue is indicated at the bottom of each index page, items determined to be of interest from the cross reference entries may be located without seeing the main entry. Each item is indexed under one or more subject headings, and a notation of content (which may be the title) is given in each entry. Cross references between subject headings are also provided. Multiple entries under one author or subject heading are listed in page number order.

AUTHOR INDEX

Ackley, Paul R., and Robert A. Nardello; Cross Tabulations Applicable to Mini-Computers; Nov-Dec p 437-444 (3 refs)

Amick, Daniel James; Scientific Elitism and the Information System of Science; Sep-Oct p 317-327 (20 refs)

Artandi, Susan; Information Concepts and their Utility (Opinion Paper); Jul-Aug p 242-245

Ashmole, R. F., D. E. Smith, and B. T. Stern; Cost Effectiveness of Current Awareness Sources in the Pharmaceutical Industry; Jan-Feb p 29-39 (21 refs) (*see also* Letter by Stern, Barrie T.; p 166)

Askevold, Gerald L., *see* Vallee, Jacques F.; p 287-299

Belzer, Jack; Information Theory as a Measure of Information Content; Jul-Aug p 300-304 (4 refs)

Bennett, John L., *see* Clarke, Dan C.; p 9-24

Borko, Harold; FID Budapest 1972 (Brief Communication); Mar-Apr p 164-165

Borko, Harold; The 1973 ASIS Meeting: Purpose, Programs and Benefits; Jul-Aug p 239-241

Bottle, R. T.; Collective Experimental Work in Information Science Teaching; Jan-Feb p 54-56 (6 refs)

Burns, Robert W., Jr.; Impossible Goal Setting (Letter); May-Jun p 234-235

Carlisle, James, *see* Martin, Thomas H.; p 142-147

Carpenter, Mark P., and Francis Narin; Clustering of Scientific Journals; Nov-Dec p 425-436 (18 refs)

Carroll, John, *see* Tague, Jean; p 40-44

Carroll, John M., and Jean M. Tague; Use of an Automatic Text Analyzer in Preparation of SDI Profiles; Jul-Aug p 277-281 (2 refs)

Chalice, R., *see* Mittman, B.; p 135-141

Chambers, George R., and James S. Healey; Journal Citations in Master's Theses: One Measurement of a Journal Collection; Sep-Oct p 397-401 (3 refs)

Clarke, Dan C., and John L. Bennett; An Experimental Framework for Observing the Indexing Process; Jan-Feb p 9-24 (12 refs)

Cody, Roger; The Effect of Document Ordering in Rocchio's Clustering Algorithm (Brief Communication); May-Jun p 232-233

Cooper, William S.; On Selecting a Measure of Retrieval Effectiveness; Mar-Apr p 87-100 (10 refs)

Jan-Feb p 1-76
Mar-Apr p 77-167
May-Jun p 168-235
Jul-Aug p 236-309
Sep-Oct p 310-404
Nov-Dec p 405-465

Cooper, William S.; On Selecting a Measure of Retrieval Effectiveness—Part II. Implementation of the Philosophy; Nov-Dec p 413-424 (3 refs)

Craig, C. Samuel, *see* Stern, Louis W.; p 171-179

Dillaman, D., *see* Mittman, B.; p 135-141

Dym, Eleanor D., and Donald L. Shirey; A Statistical Decision Model for Periodical Selection for a Specialized Information Center; Mar-Apr p 110-119 (10 refs)

Eichesen, Dennis R.; A Correlation of Bibliographic Data Elements for use in a Generalized File Management System; Jan-Feb p 45-53 (27 refs)

Fayollat, James; On-Line Serials Control System in a Large Biomedical Library—Part III. Comparison of On-Line and Batch Operations and Cost Analysis; Mar-Apr p 80-86 (8 refs)

Feinberg, Edwin H.; Core Serials in Biology (Letter); Nov-Dec p 465

Feinman, R. D., and K. L. Kwok; The Construction of Journal-Oriented Classification Schemes (Brief Communication); Jan-Feb p 71-72

Feinman, R. D., and K. L. Kwok; Classification of Scientific Documents by Means of Self-Generated Groups Employing Free Language; Sep-Oct p 382-396 (10 refs)

Flanagan, Carolyn, *see* Wood, James L.; p 25-28

Friedlander, Janet; Clinician Search for Information; Jan-Feb p 65-69 (4 refs)

Garfield, Eugene; Trademarks (Letter); Mar-Apr p 166

Golashvili, T. V.; Problems of Compilation and Evaluation of Property Data of Substances and Materials; Jan-Feb p 57-64 (32 refs)

Healey, James S., *see* Chambers, George R.; p 397-401

Jones, Kevin P.; The Environment of Classification: The Concept of Mutual Exclusivity; Mar-Apr p 157-163 (26 refs)

Katzer, Jeffrey, and Patricia Moell; On the Dimensionality of Users' Attitudes Toward On-Line Retrieval Systems—A Replication? (Brief Communication); Jul-Aug p 307-308 (2 refs)

Kennedy, H. Edward, *see* Wood, James L.; p 25-28

Kim, Chai; Theoretical Foundations of Thesaurus-Construction and Some Methodological Considerations for Thesaurus-Updating; Mar-Apr p 148-156 (46 refs)

Kirson, Benjamin L.; Scientific and Technological Information Systems in the Soviet Union (Brief Communication); Jul-Aug p 306-307 (9 refs)

Kraft, Donald H.; A Decision Theory View of the Information Retrieval Situation: An Operations Research Approach; Sep-Oct p 368-376 (19 refs)

Kuvshinoff, Boris W.; On Self as Subject (Letter); Jul-Aug p 309 (1 ref)

Kwok, K. L., *see* Feinman, R. D.; p 71-72

Kwok, K. L., *see* Feinman, R. D.; p 382-396

Landry, B. C., B. A. Mathis, N. M. Meara, J. E. Rush, and C. E. Young; Definition of Some Basic Terms in Computer and Information Science (Opinion Paper); Sep-Oct p 328-342 (14 refs)

La Greca, Anthony J., *see* Stern, Louis W.; p 171-179

Lazorick, Gerald J., *see* Stern, Louis W.; p 171-179

Leimkuhler, Ferdinand F.; Operations Research and Information Science—A Common Cause (ASIS Distinguished Lecture—1972); Jan-Feb p 3-8 (21 refs)

Levine, Emil H.; National Security Council Directive Establishes Data Index System (Letter); Jan-Feb p 76

Levine, Emil H.; MIS Spinoff of a Conventional STINFO Retrieval System (Brief Communication); Jul-Aug p 305 (1 ref)

Martin, Thomas H., James Carlisle, and Siegfried Treu; The User Interface for Interactive Bibliographic Searching: An Analysis of the Attitudes of Nineteen Information Scientists; Mar-Apr p 142-147 (2 refs)

Mathis, B. A., *see* Landry, B. C.; p 328-342

Mathis, Betty A., James E. Rush, and Carol E. Young; Improvement of Automatic Abstracts by the Use of Structural Analysis; Mar-Apr p 101-109 (18 refs)

McGee, Rob; An Analysis of Manual Circulation Systems for Academic Libraries; May-Jun p 210-217 (3 refs)

McMullen, R. M.; Information—Value and Cost (Letter); Sep-Oct p 404

Meara, N. M., *see* Landry, B. C.; p 328-342

Minker, Jack, Eero Peltola, and Gerald A. Wilson; Document Retrieval Experiments Using Cluster Analysis; Jul-Aug p 246-260 (16 refs)

Mitchell, P. C., J. T. Rickman, and W. E. Walden; SOLAR: A Storage and On-Line Automatic Retrieval System; Sep-Oct p 347-358 (22 refs)

Mittman, B., R. Chalice, and D. Dillaman; Mixed Data Structures in a Multi-Purpose Retrieval System; Mar-Apr p 135-141 (8 refs)

Moell, Patricia, *see* Katzer, Jeffrey; p 307-308

Montgomery, Ruth Reinke; Productivity in Toxicity Papers (Brief Communication); Sep-Oct p 402-403 (5 refs)

Moore, J. R.; On Interrelationships of the Sciences and Technology as Expressed by a Categorized List of Journals and Modified by a Classification System; Sep-Oct p 359-367 (4 refs)

Murphy, Larry J., "Lotka's Law in the Humanities?" (Brief Communication); Nov-Dec p 461-462

Nardello, Robert A., *see* Ackley, Paul R.; p 437-444

Narin, Francis, *see* Carpenter, Mark P.; p 425-436

O'Connor, John; Text Searching Retrieval of Answer-Sentences and Other Answer-Passages; Nov-Dec p 445-460 (31 refs)

Peltola, Eero, *see* Minker, Jack; p 246-260

Perk, Lawrence J., *see* Saracevic, Tefko; p 120-134

Rickman, J. T., *see* Mitchell, P. C.; p 347-358

Rosenberg, Victor; A Technique for Monitoring User Behavior at the Computer Terminal Interface (Brief Communication); Jan-Feb p 71 (6 refs)

Rush, J. E., *see* Landry, B. C.; p 328-342

Rush, James E., *see* Mathis, Betty A.; p 101-109

Salton, G.; On the Development of Information Science; May-Jun p 218-220 (5 refs)

Saracevic, Tefko, and Lawrence J. Perk; Ascertaining Activities in a Subject Area Through Bibliometric Analysis. Application to *Library Literature;* Mar-Apr p 120-134 (16 refs)

Scheffler, Frederic L.; A Novel Philosophy for the Design of Information Storage and Retrieval Systems Appropriate for the '70's; May-Jun p 205-209

Schultz, Louise; Vocabulary Management Updated (Letter); May-Jun p 234

Jan-Feb *p 1-76*
Mar-Apr *p 77-167*
May-Jun *p 168-235*
Jul-Aug *p 236-309*
Sep-Oct *p 310-404*
Nov-Dec *p 405-465*

Shirey, Donald L., *see* Dym, Eleanor D.; p 110-119

Siamecka, Vladimir; An Audiographic System for Self-Instruction; Nov-Dec p 405-412 (5 refs)

Small, Henry; Co-citation in the Scientific Literature: A New Measure of the Relationship Between Two Documents; Jul-Aug p 265-269 (12 refs)

Smith, D. E., *see* Ashmole, R. F.; p 29-39

Sparck Jones, Karen; Index Term Frequency and Quartile Deletion (Letter); Mar-Apr p 166-167

Sparck Jones, Karen; Does Indexing Exhaustivity Matter?; Sep-Oct p 313-316 (6 refs)

Stern, B. T., *see* Ashmole, R. F.; p 29-39

Stern, Barrie T.; Apology & Compliment (Letter); Mar-Apr p 166

Stern, Louis W., C. Samuel Craig, Anthony J. La Greca, and Gerald J. Lazorick; Promotion of Information Services: An Evaluation of Alternative Approaches; May-Jun p 171-179 (7 refs)

Swanson, Rowena W.; On Clustering Techniques in Information Science (Brief Communication); Jan-Feb p 72-73 (12 refs)

Tague, Jean, and John Carroll; Information in an Informationless World *or* The Making of an Information Scientist (Opinion Paper); Jan-Feb p 40-44 (2 refs)

Tague, Jean M., *see* Carroll, John M.; p 277-281

Thompson, Charles W. N.; The Functions of Abstracts in the Initial Screening of Technical Documents by the User; Jul-Aug p 270-276 (71 refs)

Thompson, Harold B.; Check List for Information Environment (Brief Communication); Jan-Feb p 70-71 (2 refs)

Treu, Siegfried, *see* Martin, Thomas H.; p 142-147

Vallee, Jacques F., and Gerald L. Askevold; Information Organization for Interactive Use: Design Implications in Data-Base Systems; Jul-Aug p 287-299 (14 refs)

Walden, W. E., *see* Mitchell, P. C.; p 347-358

Ware, Glenn O.; A General Statistical Model for Estimating Future Demand Levels of Data-Base Utilization Within an Information Retrieval Organization; Jul-Aug p 261-264 (5 refs)

Weinert, Hartmut H.; A Keyword System For Small Information Centers; May-Jun p 180-192 (3 refs)

Whittemore, Bruce J., and M. C. Yovits; A Generalized Conceptual Development for the Analysis and Flow of Information; May-Jun p 221-231 (12 refs)

Wilson, Gerald A., *see* Minker, Jack; p 246-260

Windsor, Diane M., *see* Windsor, Donald A.; p 377-381

Windsor, Donald A., and Diane M. Windsor; Citation of the Literature by Information Scientists in Their Own Publications; Sep-Oct p 377-381 (13 refs)

Wood, James L., Carolyn Flanagan, and H. Edward Kennedy; Overlap Among the Journal Articles Selected for Coverage by BIOSIS, CAS, and Ei; Jan-Feb p 25-28 (2 refs)

Worthen, Dennis B.; The Epidemic Process and The Contagion Model; Sep-Oct p 343-346 (14 refs)

Wright, Kieth; Social Science Information Characteristics with Particular Reference to the Educational Resources Information Centers (ERIC); May-Jun p 193-204 (75 refs)

Yerkey, A. Neil; Models of Index Searching and Retrieval Effectiveness of Keyword-In-Context Indexes; Jul-Aug p 282-286 (6 refs)

Young, C. E., *see* Landry, B. C.; p 328-342

Young, Carol E., *see* Mathis, Betty A.; p 101-109

Yovits, M. C., *see* Whittemore, Bruce J.; p 221-231

Jan-Feb *p 1-76*
Mar-Apr *p 77-167*
May-Jun *p 168-235*
Jul-Aug *p 236-309*
Sep-Oct *p 310-404*
Nov-Dec *p 405-465*

SUBJECT INDEX

ABSTRACTING

Automatic abstracting system improvement by the use of structural analysis, *see* Mathis, Betty A.; p 101-109

ABSTRACTING AND INDEXING SERVICES

Coverage overlap among BIOSIS, CAS, and EI, *see* Wood, James L.; p 25-28

ABSTRACTS

Functions of abstracts in the initial screening of technical documents by the user, *see* Thompson, Charles W. N.; p 270-276

AMERICAN SOCIETY FOR INFORMATION SCIENCE

1973 ASIS Annual Meeting, *see* Borko, Harold; p 239-241

ANALOGIES

Comparison of epidemic and contagion models of the communication process, *see* Worthen, Dennis B.; p 343-346

BEHAVIORAL STUDIES

Using experimenter as subject for the experiment, *see* Kuvshinoff, Boris W.; p 309

BIBLIOGRAPHIC DATA BASES

Cost effectiveness of current awareness sources in the pharmaceutical industry, *see* Ashmole, R. F.; p 29-39 (*see also* Stern, Barrie T.; p 166)

Correlation of data elements contained in sixteen data bases, *see* Elchesen, Dennis R.; p 45-53

Estimating future demand levels of data base utilization within an information retrieval organization, *see* Ware, Glenn O.; p 261-264

BIBLIOGRAPHIES

Citation analysis of information science bibliographies, *see* Salton, G.; p 218-220

BIBLIOMETRIC STUDIES

Analysis of the literature of librarianship, *see* Saracevic, Tefko; p 120-134

BIOLOGICAL LITERATURE

Newest edition of "Guide to the Vocabulary of Biological Literature", *see* Schultz, Louise; p 234

Core serials in biology, *see* Feinberg, Edwin H.; p 465

BIOMEDICAL INFORMATION

Minicomputer system for preparation of complex statistical cross-tabulations, *see* Ackley, Paul R.; p 437-444

BIOSCIENCES INFORMATION SERVICE OF BIOLOGICAL ABSTRACTS (BIOSIS)

Coverage overlap with CAS and EI, *see* Wood, James L.; p 25-28

CHEMICAL ABSTRACTS SERVICE (CAS)

Coverage overlap with BIOSIS and EI, *see* Wood, James L.; p 25-28

CITATION STUDIES

Information science development as indicated by citation analysis of bibliographies covering the field, *see* Salton, G.; *p 218-220*

Co-citation links among documents in the scientific literature, *see* Small, Henry; p 265-269

References made by information scientists in their own literature, *see* Windsor, Donald A.; p 377-381

Journal citations in master's theses as measurement of a journal collection, *see* Chambers, George R.; p 397-401

Productivity in toxicity papers, *see* Montgomery, Ruth Reinke; p 402-403

Cluster analysis of scientific journals using cross citing amongst the journals, *see* Carpenter, Mark P.; p 425-436

CLASSIFICATION

Journal-oriented classification schemes for physics information, *see* Feinman, R. D.; p 71-72

Analysis of library literature using bibliometrics and classification, *see* Saracevic, Tefko; p 120-134

Concept of mutual exclusivity, *see* Jones, Kevin P.; p 157-163

Mechanical classification of scientific papers by means of self-generated groups employing free language, *see* Feinman, R. D.; p 382-396

CLUSTERING TECHNIQUES

Clustering techniques in information science, *see* Swanson, Rowena W.; p 72-73

Effect of document ordering in Rocchio's clustering algorithm, *see* Cody, Roger; p 232-233

Document retrieval experiments using cluster analysis, *see* Minker, Jack; p 246-260

Classification of scientific papers by means of self-generated groups employing free language, *see* Feinman, R. D.; p 382-396

Cluster analysis of scientific journals using cross citing amongst the journals, *see* Carpenter, Mark P.; p 425-436

COMMUNICATION THEORY

Information concepts examined within the framework of the mathematical theory of communication and semiotics, *see* Artandi, Susan; p 242-245

Measure of semantic information content using coding theory, *see* Belzer, Jack; p 300-304

COMPUTER SCIENCE

Definition of some basic terms, *see* Landry, B. C.; p 328-342

CONFERENCES

see MEETINGS

COSTS

Cost effectiveness of current awareness sources in the pharmaceutical industry, *see* Ashmole, R. F.; p 29-39 (*see also* Stern, Barrie T.; p 166)

Automated serials control system in a large biomedical library, *see* Fayollat, James; p 80-86

Jan-Feb	*p 1-76*	*Jul-Aug*	*p 236-309*
Mar-Apr	*p 77-167*	*Sep-Oct*	*p 310-404*
May-Jun	*p 168-235*	*Nov-Dec*	*p 405-465*

COSTS (cont.)

Value and cost of information, *see* McMullen, R. M.; p 404

Audiographic system for self-instruction, *see* Slamecka, Vladimir; p 405-412

CURRENT AWARENESS

Cost effectiveness of current awareness sources in the pharmaceutical industry, *see* Ashmole, R. F.; p 29-39 (*see also* Stern, Barrie T.; p 166)

DATA BASE MANAGEMENT SYSTEMS

Remote Information Query System (RIQS) for both bibliographic and data management applications, *see* Mittman, B.; p 135-141

DATA BASES

see also BIBLIOGRAPHIC DATA BASES

Design implications in data-base systems of information organization for interactive use, *see* Vallee, Jacques F.; p 287-299

DATA STRUCTURES

Mixed data structures in a multi-purpose retrieval system, *see* Mittman, B.; p 135-141

DECISION-MAKING

Generalized conceptual development for the analysis and flow of information, *see* Whittemore, Bruce J.; p 221-231

DECISION THEORY

Model of information retrieval decision problem using a decision theory approach, *see* Kraft, Donald H.; p 368-376

DOCUMENT DATA BASES

see also BIBLIOGRAPHIC DATA BASES

EDUCATION OF INFORMATION SCIENTISTS

see INFORMATION SCIENCE EDUCATION

EDUCATIONAL RESOURCES INFORMATION CENTER

Summary and criticisms of ERIC system in context of social science information characteristics, *see* Wright, Kieth; p 193-204

EDUCATIONAL TECHNOLOGY

Audiographic system for self-instruction, *see* Slamecka, Vladimir; p 405-412

ENGINEERING INDEX (Ei)

Coverage overlap with BIOSIS and CAS, *see* Wood, James L.; p 25-28

EVALUATION

Selecting a measure of retrieval effectiveness, *see* Cooper, William S.; p 87-100 (Part I), p 413-424 (Part II)

EXPERIMENTAL STUDIES

Using experimenter as subject for behavioral studies, *see* Kuvshinoff, Boris W.; p 309

FILE MANAGEMENT

Correlation of data elements contained in sixteen bibliographic data bases, *see* Elchesen, Dennis R.; p 45-53

FREE LANGUAGE WORDS

Newest edition of "Guide to the Vocabulary of Biological Literature", *see* Schultz, Louise; p 234

Classification of scientific papers by means of self-generated groups employing free language, *see* Feinman, R. D.; p 382-396

GOVERNMENT DOCUMENTS

Data index system for U.S. government classified information, *see* Levine, Emil H.; p 76

HIGHWAY RESEARCH INFORMATION

see ROAD RESEARCH INFORMATION

HUMANITIES LITERATURE

Applicability of Lotka's Law in the humanities, *see* Murphy, Larry J.; p 461-462

INDEXING

Experimental framework for observing the indexing process, *see* Clarke, Dan C.; p 9-24

Data index system for U.S. government classified information, *see* Levine, Emil H.; p 76

Effects of index term frequency and quartile deletions on retrieval, *see* Sparck Jones, Karen; p 166-167

Keyword system for use in a small information center, *see* Weinert, Hartmut H.; p 180-192

ERIC system, *see* Wright, Kieth; p 193-204

Models of index searching and retrieval effectiveness of Keyword-In-Context indexes, *see* Yerkey, A. Neil; p 282-286

Indexing exhaustivity for documents and requests, *see* Sparck Jones, Karen; p 313-316

INFORMATION

Cost and value, *see* McMullen, R. M.; p 404

INFORMATION CENTERS

Keyword system for use in a small information center, *see* Weinert, Hartmut H.; p 180-192

INFORMATION PROCESSING

Minicomputer system for preparation of complex statistical cross-tabulations, *see* Ackley, Paul R.; p 437-444

INFORMATION RETRIEVAL

Selecting a measure of retrieval effectiveness, *see* Cooper, William S.; p 87-100 (Part I), p 413-424 (Part II)

Remote Information Query System (RIQS) for both bibliographic and data management applications, *see* Mittman, B.; p 135-141

Effects of index term frequency and quartile deletions on retrieval, *see* Sparck Jones, Karen; p 166-167

Information system design philosophy appropriate for the '70's, *see* Scheffler, Frederic L.; p 205-209

Jan-Feb p 1-76
Mar-Apr p 77-167
May-Jun p 168-235
Jul-Aug p 236-309
Sep-Oct p 310-404
Nov-Dec p 405-465

INFORMATION RETRIEVAL (cont.)

Effect of document ordering in Rocchio's clustering algorithm, *see* Cody, Roger; p 232-233

Document retrieval experiments using cluster analysis, *see* Minker, Jack; p 246-260

Estimating future demand levels of data base utilization within an information retrieval organization, *see* Ware, Glenn O.; p 261-264

Models of index searching and retrieval effectiveness of Keyword-In Context indexes, *see* Yerkev, A. Neil; p 282-286

Measure of information context in document surrogates using coding theory, *see* Belzer, Jack; p 300-304

MIS spinoff of a conventional scientific and technical information retrieval system, *see* Levine, Emil H.; p 305

Users' attitudes toward on-line retrieval systems, *see* Katzer, Jeffrey; p 307-308

Effect of indexing exhaustivity on retrieval performance, *see* Sparck Jones, Karen; p 313-316

Operational Storage and On-Line Automatic Retrieval (SOLAR) system, *see* Mitchell, P. C.; p 347-358

Model of information retrieval decision problem using a decision theory approach, *see* Kraft, Donald H.; p 368-376

Text searching retrieval of answer-sentences and other answer-passages, *see* O'Connor, John; p 445-460

INFORMATION SCIENCE

Common origins of operations research and information science, *see* Leimkuhler, Ferdinand F.; p 3-8

Generalized conceptual development for the analysis and flow of information, *see* Whittemore, Bruce J.; p 221-231

Information concepts examined within the framework of the mathematical theory of communication and semiotics, *see* Artandi, Susan; p 242-245

Definition of some basic terms, *see* Landry, B. C.; p 328-342

Applicability of Lotka's Law in the humanities, *see* Murphy, Larry J.; p 461-462

INFORMATION SCIENCE EDUCATION

New approach involving both undergraduate and graduate years, *see* Tague, Jean; p 40-44

Collective experimental work in information science teaching, *see* Bottle, R. T.; p 54-56

INFORMATION SCIENCE LITERATURE

Development of field as indicated by a citation analysis of information science bibliographies, *see* Salton, G.; p 218-220

Citations made by information scientists in their own literature, *see* Windsor, Donald A.; p 377-381

INFORMATION SCIENCE PROFESSION

Virtues of setting impossible goals, *see* Burns, Robert W., Jr.; p 234-235

INFORMATION SCIENTISTS

Opinion survey on the user interface for interactive bibliographic searching, *see* Martin, Thomas H.; p 142-147

INFORMATION SERVICES

Cost effectiveness of current awareness sources in the pharmaceutical industry, *see* Ashmole, R. F.; p 29-39 (*see also* Stern, Barrie T.; p 166)

Evaluation of different promotional programs for SDI services, *see* Stern, Louis W.; p 171-179

INFORMATION SYSTEMS

Check list of factors to consider for system elements, *see* Thompson, Harold B.; p 70-71

Social science information characteristics with particular reference to the ERIC system, *see* Wright, Kieth; p 193-204

Scientific and technological information systems in the U.S.S.R., *see* Kirson, Benjamin L.; p 306-307

INFORMATION TRANSFER

Kinds of sources used by the faculty of a medical school, *see* Friedlander, Janet; p 65-69

Scientific elitism and the information system of science, *see* Amick, Daniel James; p 317-327

Comparison of epidemic and contagion models of the communication process, *see* Worthen, Dennis B.; p 343-346

INTERACTIVE SYSTEMS

see also ON-LINE SYSTEMS

Indexing experiments using the computer-based Interactive Negotiated Search Facility, *see* Clarke, Dan C.; p 9-24

User interface for interactive bibliographic searching, *see* Martin, Thomas H.; p 142-147

Design implications in data-base systems of information organization for interactive use, *see* Vallee, Jacques F.; p 287-299

INTERNATIONAL FEDERATION FOR DOCUMENTATION (FID)

Report on 1972 Conference and International Congress in Budapest, *see* Borko, Harold; p 164-165

JOURNAL COLLECTIONS

Periodical selection for a specialized information center, *see* Dym, Eleanor D.; p 110-119

Measurement of use by examination of journal citations in master's theses, *see* Chambers, George R.; p 397-401

JOURNAL STUDIES

Coverage overlap among BIOSIS, CAS, and EI, *see* Wood, James L.; p 25-28

Journal-oriented classification schemes for physics information, *see* Feinman, R. D.; p 71-72

Interrelationships of the sciences and technology as expressed by a categorized list of journals, *see* Moore, J. R.; p 359-367

Cluster analysis of scientific journals using cross citing amongst the journals, *see* Carpenter, Mark P.; p 425-436

Applicability of Lotka's Law in the humanities, *see* Murphy, Larry J.; p 461-462

LEARNING SYSTEMS

Audiographic system for self-instruction, *see* Slamecka, Vladimir; p 405-412

Jan-Feb *p 1-76*
Mar-Apr *p 77-167*
May-Jun *p 168-235*
Jul-Aug *p 236-309*
Sep-Oct *p 310-404*
Nov-Dec *p 405-485*

LIBRARY AUTOMATION

On-line serials control system in a large biomedical library, *see* Fayollat, James; p 80-86

LIBRARY COLLECTIONS

see JOURNAL COLLECTIONS

LIBRARY LITERATURE

Subject literature analysis using bibliometrics and classification, *see* Saracevic, Tefko; p 120-134

LIBRARY SYSTEMS

Manual circulation systems for academic libraries, *see* McGee, Rob; p 210-217

LIBRARY USERS

Kinds of sources used by the faculty of a medical school in information searches, *see* Friedlander, Janet; p 65-69

LINGUISTICS

Automatic abstracting system improvement by the use of structural analysis, *see* Mathis, Betty A.; p 101-109

MANAGEMENT INFORMATION SYSTEMS (MIS)

MIS spinoff of a conventional scientific and technical information retrieval system, *see* Levine, Emil H.; p 305

MARKETING

Evaluation of different promotional programs for SDI services, *see* Stern, Louis W.; p 171-179

MATERIALS PROPERTIES DATA

Problems of compilation and evaluation of property data, *see* Golashvili, T. V.; p 57-64

MEDICAL INFORMATION

Kinds of sources used by the faculty of a medical school in information searches, *see* Friedlander, Janet; p 65-69

MEETINGS

Report on FID Budapest 1972, *see* Borko, Harold; p 164-165

1973 ASIS Annual Meeting, *see* Borko, Harold; p 239-241

MINICOMPUTERS

Application to biomedical information processing, *see* Ackley, Paul R.; p 437-444

NUMERICAL DATA SYSTEMS

Problems of compilation and evaluation of property data of substances and materials, *see* Golashvili, T. V.; p 57-64

ON-LINE SYSTEMS

see also INTERACTIVE SYSTEMS

Monitoring user behavior at the computer terminal interface, *see* Rosenberg, Victor; p 71

Serials control system in a large biomedical library, *see* Fayollat, James; p 80-86

ON-LINE SYSTEMS (cont.)

Mixed data structures in a multi-purpose retrieval system, *see* Mittman, B.; p 135-141

Users' attitudes toward on-line retrieval systems, *see* Katzer, Jeffrey; p 307-308

Operational Storage and On-Line Automatic Retrieval (SOLAR) system, *see* Mitchell, P. C.; p 347-358

OPERATIONS RESEARCH

Common origins of operations research and information science, *see* Leimkuhler, Ferdinand F.; p 3-8

Model of information retrieval decision problem using a decision theory approach, *see* Kraft, Donald H.; p 368-376

PERIODICAL SELECTION

Statistical decision model for a specialized collection, *see* Dym, Eleanor D.; p 110-119

PHARMACEUTICAL INFORMATION

Cost effectiveness of current awareness sources, *see* Ashmole, R. F.; p 29-39 (*see also* Stern, Barrie T.; p 166)

PHYSICS INFORMATION

Journal-oriented classification schemes, *see* Feinman, R. D.; p 71-72

PROFILES

Use of an automatic text analyzer in preparation of SDI profiles, *see* Carroll, John M.; p 277-281

ROAD RESEARCH INFORMATION

Keyword system for use in a small information center, *see* Weinert, Hartmut H.; p 180-192

RUSSIA

see SOVIET UNION

SCIENTIFIC LITERATURE

Co-citation as a measure of the relationship between two documents, *see* Small, Henry; p 265-269

Interrelationships of the sciences and technology as expressed by a categorized list of journals, *see* Moore, J. R.; p 359-367

Classification by means of self-generated groups employing free language, *see* Feinman, R. D.; p 382-396

Cluster analysis of scientific journals using cross citing amongst the journals, *see* Carpenter, Mark P.; p 425-436

SCIENTISTS

Scientific elitism and the information system of science, *see* Amick, Daniel James; p 317-327

SECONDARY SERVICES

see ABSTRACTING AND INDEXING SERVICES

SELECTIVE DISSEMINATION OF INFORMATION

Evaluation of different promotional programs for SDI services, *see* Stern, Louis W.; p 171-179

Jan-Feb p 1-76
Mar-Apr p 77-167
May-Jun p 168-235
Jul-Aug p 236-309
Sep-Oct p 310-404
Nov-Dec p 405-465

SELECTIVE DISSEMINATION OF INFORMATION (cont.)

Use of an automatic text analyzer in preparation of SDI profiles, *see* Carroll, John M.; p 277-281

SERIALS

see also headings beginning with JOURNAL or PERIODICAL

On-line serials control system in a large biomedical library, *see* Fayollat, James; p 80-86

Core serials in biology, *see* Feinberg, Edwin H.; p 465

SOCIAL SCIENCE INFORMATION

Characteristics with particular reference to the ERIC system, *see* Wright, Kieth; p 193-204

SOVIET UNION

Scientific and technological information systems in the U.S.S.R., *see* Kirson, Benjamin L.; p 306-307

SYSTEM DESIGN

Check list of factors to consider for system elements, *see* Thompson, Harold B.; p 70-71

Information storage and retrieval system design philosophy appropriate for the '70's, *see* Scheffler, Frederic L.; p 205-209

Design implications in data-base system of information organization for interactive use, *see* Vallee, Jacques F.; p 287-299

SYSTEMS ANALYSIS

Manual circulation systems for academic libraries, *see* McGee, Rob; p 210-217

TEACHING TECHNIQUES

Collective experimental work in information science teaching, *see* Bottle, R. T.; p 54-56

TECHNOLOGICAL LITERATURE

Interrelationships of the sciences and technology as expressed by a categorized list of journals, *see* Moore, J. R.; p 359-367

TERMINOLOGY

see VOCABULARY

TEXT PROCESSING

Use of an automatic text analyzer in preparation of SDI profiles, *see* Carroll, John M.; p 277-281

Text searching retrieval of answer-sentences and other answer-passages, *see* O'Connor, John; p 445-460

THESAURI

Theoretical foundations of construction and methodological considerations for updating, *see* Kim, Chai; p 148-156

ERIC system, *see* Wright, Kieth; p 193-204

TOXICOLOGICAL LITERATURE

Periodical selection for a specialized collection, *see* Dym, Eleanor D.; p 110-119

Productivity in toxicity papers, *see* Montgomery, Ruth Reinke; p 402-403

TRADEMARKS

Correction regarding use of a registered trademark, *see* Garfield, Eugene; p 166

UNITED STATES GOVERNMENT

Data index system for classified information, *see* Levine, Emil H.; p 76

USERS

see also LIBRARY USERS

Monitoring user behavior at the computer terminal interface, *see* Rosenberg, Victor; p 71

Man-machine interface for interactive bibliographic searching, *see* Martin, Thomas H.; p 142-147

Estimating future demand levels of data base utilization within an information retrieval organization, *see* Ware, Glenn O.; p 261-264

Functions of abstracts in the initial screening of technical documents by the user, *see* Thompson, Charles W. N.; p 270-276

Users' attitudes toward on-line retrieval systems, *see* Katzer, Jeffrey; p 307-308

VOCABULARY

Newest edition of "Guide to the Vocabulary of Biological Literature", *see* Schultz, Louise; p 234

Definition of some basic terms in computer and information science, *see* Landry, B. C.; p 328-342

Jan-Feb *p 1-76*
Mar-Apr *p 77-167*
May-Jun *p 168-235*
Jul-Aug *p 236-309*
Sep-Oct *p 310-404*
Nov-Dec *p 405-465*

JOURNAL
OF THE
AMERICAN SOCIETY
FOR
INFORMATION SCIENCE

VOLUME 24

1973

VOLUME CONTENTS

Published by

AMERICAN SOCIETY FOR INFORMATION SCIENCE

Journal of the American Society for Information Science
Volume Contents, Volume 24

No. 1, January—February 1973

FERDINAND F. LEIMKUHLER	ASIS Distinguished Lecture—1972 Operations Research and Information Science—A Common Cause	3
DAN C. CLARKE and JOHN L. BENNETT	An Experimental Framework For Observing the Indexing Process	9
JAMES L. WOOD, CAROLYN FLANAGAN, and H. EDWARD KENNEDY	Overlap Among the Journal Articles Selected for Coverage by BIOSIS, CAS, and Ei	25
R. F. ASHMOLE, D. E. SMITH and B. T. STERN	Cost Effectiveness of Current Awareness Sources in the Pharmaceutical Industry	29
JEAN TAGUE and JOHN CARROLL	Opinion Paper Information in an Informationless World or The Making of an Information Scientist	40
DENNIS R. ELCHESEN	A Correlation of Bibliographic Data Elements for use in a Generalized File Management System	45
R. T. BOTTLE	Collective Experimental Work in Information Science Teaching	54
T. V. GOLASHVILI	Problems of Compilation and Evaluation of Property Data of Substances and Materials	57
JANET FRIEDLANDER	Clinician Search for Information	65
	Brief Communications	
HAROLD B. THOMPSON	Check List for Information Environment	70
VICTOR ROSENBERG	A Technique for Monitoring User Behavior at the Computer Terminal Interface	71
R. D. FEINMAN and K. L. KWOK	The Construction of Journal-Oriented Classification Schemes	71
ROWENA W. SWANSON	On Clustering Techniques in Information Science	72

	Book Reviews	74
	Letters to the Editor	76
COVER	Networking	

No. 2, March–April 1973

	In Memoriam—I. A. Warheit	
JAMES FAYOLLAT	On-Line Serials Control System in a Large Biomedical Library: Part III	80
WILLIAM S. COOPER	On Selecting a Measure of Retrieval Effectiveness	87
BETTY A. MATHIS, JAMES E. RUSH and CAROL E. YOUNG	Improvement of Automatic Abstracts by the Use of Structural Analysis	101
ELEANOR D. DYM and DONALD L. SHIREY	A Statistical Decision Model for Periodical Selection for a Specialized Information Center	110
TEFKO SARACEVIC and LAWRENCE J. PERK	Ascertaining Activities in a Subject Area Through Bibliometric Analysis	120
B. MITTMAN, R. CHALICE and D. DILLAMAN	Mixed Data Structures in a Multi-Purpose Retrieval System	135
THOMAS H. MARTIN, JAMES CARLISLE, and SIEGFRIED TREU	The User Interface for Inactive Bibliographic Searching: An Analysis of the Attitudes of Nineteen Information Scientists	142
CHAI KIM	Theoretical Foundations of Thesaurus-Construction and Some Methodological Considerations for Thesaurus-Updating	148
KEVIN P. JONES	The Environment of Classification: The Concept of Mutual Exclusivity	157
HAROLD BORKO	Brief Communication FID Budapest 1972	164
	Letters to the Editor	166
COVER	Circular Reasoning	

No. 3, May–June 1973

LOUIS W. STERN C. SAMUEL CRAIG ANTHONY J. LA GRECA, and GERALD J. LAZORICK	Promotion of Information Services: An Evaluation of Alternative Approaches	171
HARTMUT H. WEINERT	A Keyword System for Small Information Centers	180
KIETH WRIGHT	Social Science Information Characteristics with Particular Reference to the Educational Resources Information Center (ERIC)	193

FREDERIC L. SCHEFFLER — A Novel Philosophy for the Design of Information Storage and Retrieval Systems Appropriate for the '70's — 205

ROB McGEE — An Analysis of Manual Circulation Systems for Academic Libraries — 210

G. SALTON — On the Development of Information Science — 218

BRUCE J. WHITTEMORE and M. C. YOVITS — A Generalized Conceptual Development for the Analysis and Flow of Information — 121

Brief Communication

ROGER CODY — The Effect of Document Ordering in Rocchio's Clustering Algorithm — 232

Letters to the Editor — 234

COVER — Biometricon

No. 4, July—August 1973

HAROLD BORKO — The 1973 ASIS Meeting: Purpose, Programs and Benefits — 239

SUSAN ARTANDI — Opinion Paper Information Concepts and their Utility — 242

JACK MINKER, EERO PELTOLA and GERALD A. WILSON — Document Retrieval Experiments Using Cluster Analysis — 246

GLENN O. WARE — A General Statistical Model for Estimating Future Demand Levels of Data-Base Utilization Within an Information Retrieval Organization — 261

HENRY SMALL — Co-citation in the Scientific Literature: A New Measure of the Relationship Between Two Documents — 265

CHARLES W. N. THOMPSON — The Functions of Abstracts in the Initial Screening of Technical Documents by the User — 270

JOHN M. CARROLL and JEAN M. TAGUE — Use of an Automatic Text Analyzer in Preparation of SDI Profiles — 277

A. NEIL YERKEY — Models of Index Searching and Retrieval Effectiveness of Keyword-in-Context Indexes — 282

JACQUES F. VALLEE and GERDA L. ASKEVOLD — Information Organization for Interactive Use: Design Implications in Data-Base Systems — 287

JACK BELZER — Information Theory as a Measure of Information Content — 300

Brief Communications

EMIL H. LEVINE — MIS Spinoff of a Conventional STINFO Retrieval System — 305

BENJAMIN L. KIRSON	Scientific and Technological Information Systems in the Soviet Union	306
JEFFREY KATZER and PATRICIA MOELL	On the Dimensionality of Users' Attitudes Toward On-Line Retrieval Systems—A Replication?	307
	Letters to the Editor	309
COVER	Tracks	

No. 5, September—October 1973

KAREN SPARCK JONES	Does Indexing Exhaustivity Matter?	313
DANIEL JAMES AMICK	Scientific Elitism and the Information System of Science	317
B. C. LANDRY, B. A. MATHIS, N. M. MEARA, J. E. RUSH and C. E. YOUNG	Opinion Paper Definition of Some Basic Terms in Computer and Information Science	328
DENNIS B. WORTHEN	The Epidemic Process and The Contagion Model	343
P. C. MITCHELL, J. T. RICKMAN and W. E. WALDEN	SOLAR: A Storage and On-Line Automatic Retrieval System	347
J. R. MOORE	On Interrelationships of the Sciences and Technology as Expressed by a Categorized List of Journals and Modified by a Classification System	359
DONALD H. KRAFT	A Decision Theory View of the Information Retrieval Situation: An Operations Research Approach	368
DONALD A. WINDSOR and DIANE M. WINDSOR	Citation of the Literature by Information Scientists in Their Own Publications	377
R. D. FEINMAN and K. L. KWOK	Classification of Scientific Documents by Means of Self-Generated Groups Employing Free Language	382
GEORGE R. CHAMBERS and JAMES S. HEALEY	Journal Citations in Master's Theses: One Measurement of a Journal Collection	397
	Brief Communications	
RUTH R. MONTGOMERY	Productivity in Toxicity Papers	402
	Letters to the Editor	404
COVER	36th ASIS Annual Conference Design by Douglas Barclay, Aerojet Electrosystems Co., Azusa, Calif.	

No. 6, November—December 1973

VLADIMIR SLAMECKA	An Audiographic System for Self-Instruction	405
WILLIAM S. COOPER	On Selecting a Measure of Retrieval Effectiveness: Part II. Implementation of the Philosophy	413

MARK P. CARPENTER and FRANCIS NARIN — Clustering of Scientific Journals — 425

PAUL R. ACKLEY and ROBERT A. NARDELLO — Cross Tabulations Applicable to Mini-Computers — 437

JOHN O'CONNOR — Text Searching Retrieval of Answer-Sentences and Other Answer-Passages — 445

Brief Communications

LARRY J. MURPHY — "Lotka's Law in the Humanities?" — 461

Book Review

HARRY SCHWARZLANDER — "Problems of Information Science" — 463

Letters to the Editor — 465

Errata — 465

Volume Index

Volume Contents

COVER — Library Science

Design By Wing-Shin Chiang;
Calligraphy By Win-Ming Chiang.